



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

January 19, 2005

Mr. Mike L. Caviness, Manager  
Washington TRU Solutions, LLC  
P.O. Box 2078  
Carlsbad, NM 88221-2078

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9212 FOR MODEL NO. RH-TRU 72-B  
PACKAGE

Dear Mr. Caviness:

As requested by your application dated November 1, 2004, enclosed is Certificate of Compliance No. 9212, Revision No. 3, for Model No. RH-TRU 72-B package. The staff's Safety Evaluation Report is also enclosed. This certificate supersedes, in its entirety, Certificate of Compliance No. 9212, Revision No. 2, dated December 27, 2002. Changes made to the enclosed Certificate of Compliance are indicated by vertical lines in the right margin.

Those on the attached list have been registered as users of the packages under the general license provision of 10 CFR §71.17 or 49 CFR §173.471. The approval constitutes authority to use the packages for shipment of radioactive material and for the packages to be shipped in accordance with the provisions of 49 CFR §173.471. Registered users may request by letter to remove their names from the Registered Users List if they are no longer users of this package.

If you have any questions regarding this certificate, please contact me or Meraj Rahimi of my staff at (301) 415-8500.

Sincerely,

A handwritten signature in black ink, appearing to read "John Monninger", is written over a horizontal line.

John Monninger, Section Chief  
Licensing Section  
Spent Fuel Project Office  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 71-9212  
TAC No.: L23780

Enclosures: 1. Certificate of Compliance  
No. 9212, Rev. No. 3  
2. Safety Evaluation Report

cc w/encl: R. Boyle, Department of Transportation  
J. M. Shuler, Department of Energy  
RAMCERTS  
Registered Users

# CERTIFICATE OF COMPLIANCE FOR RADIOACTIVE MATERIAL PACKAGES

1. a. CERTIFICATE NUMBER	b. REVISION NUMBER	c. DOCKET NUMBER	d. PACKAGE IDENTIFICATION NUMBER	PAGE	PAGES
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## 2. PREAMBLE

- This certificate is issued to certify that the package (packaging and contents) described in Item 5 below meets the applicable safety standards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.

## 3. THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>ISSUED TO (Name and Address)<br/>Department of Energy<br/>Washington, DC 20585</li> </ol> | <ol style="list-style-type: none"> <li>TITLE AND IDENTIFICATION OF REPORT OR APPLICATION<br/>Westinghouse TRU Solutions, LLC application dated November 27, 2002, as supplemented.</li> </ol> |
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## 4. CONDITIONS

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below.

## 5.

### (a) Packaging

(1) Model No. RH-TRU 72-B

(2) Description

A stainless steel, lead-lined cask designed to provide double containment for shipment of transuranic waste materials. The packaging consists of a cylindrical stainless steel and lead cask body, a separate inner stainless steel vessel, and foam lined impact limiters at each end of the cask body.

The cask body (outer cask) consists of a 1 1/2-inch thick, 41 5/8-inch outer diameter stainless steel outer shell, and a 1-inch thick, 32 3/8-inch inside diameter stainless steel inner shell, with 1 7/8 inches of lead shielding between the two shells. The cask bottom is 5-inch thick stainless steel plate. The cask is closed by a 6-inch thick stainless steel lid, and 18, 1 1/4-inch diameter bolts. The main closure lid has a double bore-type O-ring seal. The containment seal is the inner butyl O-ring seal, which is leak testable. The cask lid has a single vent/sampling port that is sealed with leak testable butyl O-ring seals.

The separate inner vessel consists of a 3/8-inch thick, 32-inch outside diameter stainless steel shell, and a 1 1/2-inch thick stainless steel bottom plate. The inner vessel is closed by a 6 1/2-inch thick stainless steel lid, and eight, 7/8-inch diameter bolts. The inner vessel closure lid has three bore-type O-ring seals. The containment seal is the middle butyl O-ring seal, which is leak testable. The inner vessel lid has a helium backfill port and a combination vent/sampling port that are sealed with leak-testable butyl O-ring seals.

A polyurethane foam-filled stainless steel impact limiter is attached to each end of the cask body using six, 1 1/4-inch diameter bolts. The radioactive contents are packaged within a stainless or carbon steel waste canister that is placed in the inner vessel.

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5.(a) (2) Description (Continued)

The approximate dimensions and weights of the package are as follows:

Overall package length	187 3/4 inches
Impact limiter diameter	76 inches
Cask length	141 3/4 inches
Cask outer diameter (OD)	41 5/8 inches
Inner vessel length	130 inches
Inner vessel OD	32 inches
Cask lead shield thickness	3 7/8 inches
Maximum package weight (including contents)	45,000 pounds
Maximum weight of contents (including waste canister)	8,000 pounds

(3) Drawings

The packaging is constructed and assembled in accordance with Packaging Technology Drawing No. X-106-500-SNP, Sheets 7-9, Rev. 3.

The fixed lid waste canister is constructed and assembled in accordance with Packaging Technology Drawing No. X-106-501-SNP, Rev. 3. The removable lid waste canister is constructed and assembled in accordance with Packaging Technology Drawing No. X-106-502-SNP, Rev. 1.

(b) Contents

(1) Type and form of material

Byproduct, source, and special nuclear material in the form of dewatered, solid or solidified materials and waste, within the stainless or carbon steel waste canister described in Item 5(a)(3). Explosives, corrosives (pH less than 2 or greater than 12.5), and compressed gases are prohibited. Within a waste canister radioactive and non-radioactive pyrophorics must not exceed 1 weight percent. Flammable volatile organics are limited along with hydrogen to ensure the absence of flammable gas mixtures in RH-TRU waste payloads as described in Section 5.0 of Appendix 1.3.7, Rev. 3, June 2002, of the application.

(2) Maximum quantity of material per package.

Not to exceed 8,000 pounds, including the weight of the waste canister.

Fissile material not to exceed 325 grams Pu-239 equivalent for RH-TRU waste containers containing materials in which the form or distribution of the fissile radionuclides are not restricted as described in Section 3.1, "Nuclear Criticality" of Appendix 1.3.7, Rev. 3, June 2002, of the application. Pu-239 equivalent is determined in accordance with Section 3.0 of Appendix 1.3.7, Rev. 3, June 2002, of the application. Low enriched uranium is authorized for waste containers containing material that is primarily uranium (in terms of

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heavy metal component) and the waste matrix is distributed within the canister in such a manner that the maximum enrichment does not exceed 0.96% uranium (U-235) fissile equivalent mass in any location of the waste material.

Maximum decay heat per package not to exceed 50 watts for organic wastes and 300 watts for inorganic waste, and not to exceed the limits in Section 5.2, "Decay Heat" of Appendix 1.3.7, Rev. 3, June 2002, of the application.

- (c) Criticality Safety Index: 0.0
6. Waste content codes and classification, physical form, chemical properties, chemical compatibility, gas generation, fissile content, decay heat, isotopic inventory, weight, and radiation dose rate must be determined and limited in accordance with Appendix 1.3.7, Rev. 3, June 2002, of the application "Remote-Handled Transuranic Waste Authorized Methods for Payload Control (RH-TRAMPAC)."
7. Each waste canister must not exceed the decay heat limits in Section 5.2 of Appendix 1.3.7, Rev. 3, June 2002, of the application, or must be tested for gas generation in accordance with Appendix 1.3.7, Rev. 3, June 2002, of the application, Section 5.0, "Gas Generation Requirements."
8. A RH-TRU waste canister may be comprised of inner containers with different content codes provided that the hydrogen gas generation rate limit or decay heat limit for all of the inner containers within the payload is assumed to be the same as the content code with the lowest hydrogen gas generation rate limit or decay heat limit.
9. The waste canister and any sealed secondary containers greater than 4 liters in size overpacked in the waste canister must be vented in accordance with the minimum specifications in Appendix 1.3.5 of the application "Specification for Filter Vents."
10. In addition to the requirements of Subpart G of 10 CFR Part 71:
- (a) Each package must be prepared for shipment and operated in accordance with the procedures described in Chapter 7.0, "Operating Procedures," of the application, as supplemented.
  - (b) Each packaging must be tested and maintained in accordance with the procedures described in Chapter 8.0, "Acceptance Tests and Maintenance Program," of the application, as supplemented.

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11. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.
12. Expiration date: February 28, 2010.

REFERENCES

Westinghouse TRU Solutions, LLC, application dated November 27, 2002.

Supplements dated: Washington TRU Solutions, LLC, November 1, 2004.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Date Jan. 19, 2005

## **SAFETY EVALUATION REPORT**

**Docket No. 71-9212**  
**Model No. RH-TRU 72-B**  
**Certificate of Compliance No. 9212**  
**Revision 3**

### **SUMMARY**

By application dated November 1, 2004, Washington TRU Solutions LLC, on behalf of the U.S. Department of Energy (DOE), requested renewal of Certificate of Compliance No. 9212, for the Model No. RH-TRU 72-B package. Washington TRU Solutions did not request any changes to the package design or authorized contents. The certificate has been renewed for a five year term.

### **EVALUATION**

By application dated November 1, 2004, Washington TRU Solutions, on behalf of the DOE, requested renewal of Certificate of Compliance No. 9212, for the Model No. RH-TRU 72-B package. Washington TRU Solutions did not request any changes to the package design or authorized contents. The staff reviewed the documents referenced in the certificate and determined that the documentation was available and complete. The staff also reviewed the operating and maintenance procedures for the package and found them to be complete and adequate.

Condition No. 5(c) of the certificate was revised to replace the wording "Transport Index for Criticality Control" with "Criticality Safety Index" as defined in 10 CFR 71.4.

Condition No. 11 of the certificate was revised to clarify that the package is approved for use under the general license provisions of 10 CFR 71.17.

### **CONCLUSION**

The Certificate of Compliance has been renewed for a five year term that expires on February 28, 2010. This change does not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9212, Revision No. 3,  
on January 19, 2005